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open end skips are used, means shall be taken to prevent the contents from falling.

- (h) Loose ends of idle legs of slings in use shall be hung on the hook.
- (i) Employees shall not be permitted to ride the hook or the load.
- (j) Loads (tools, equipment or other materials) shall not be swung or suspended over the heads of employees.
- (k) Pieces of equipment or structure susceptible to falling or dislodgement shall be secured or removed as early as possible.
- (1) An individual who is familiar with the signal code in use shall be assigned to act as a signalman when the hoist operator cannot see the load being handled. Communications shall be made by means of clear and distinct visual or auditory signals except that verbal signals shall not be permitted.
- (m) Pallets, when used, shall be of such material and contruction and so maintained as to safely support and carry the loads being handled on them.
- (n) A section of hatch through which materials or equipment are being raised, lowered, moved, or otherwise shifted manually or by a crane, winch, hoist, or derrick, shall be completely opened. The beam or pontoon left in place adjacent to an opening shall be sufficiently lashed, locked or otherwise secured to prevent it from moving so that it cannot be displaced by accident.
- (o) Hatches shall not be open or closed while employees are in the square of the hatch below.
- (p) Before loads or empty lifting gear are raised, lowered, or swung, clear and sufficient advance warning shall be given to employees in the vincinity of such operations.
- (q) At no time shall an employee be permitted to place himself in a haz-

ardous position between a swinging load and a fixed object.

[47 FR 16986, Apr. 20, 1982, as amended at 67 FR 44543, July 3, 2002]

§ 1915.117 Qualifications of operators.

Paragraphs (a) and (d) of this section shall apply to ship repairing and shipbuilding only. Paragraphs (b) and (c) of this section shall apply to ship repairing, shipbuilding and shipbreaking.

- (a) When ship's gear is used to hoist materials aboard, a competent person shall determine that the gear is properly rigged, that it is in safe condition, and that it will not be overloaded by the size and weight of the lift.
- (b) Only those employees who understand the signs, notices, and operating instructions, and are familiar with the signal code in use, shall be permitted to operate a crane, winch, or other power operated hoisting apparatus.
- (c) No employee known to have defective uncorrected eyesight or hearing, or to be suffering from heart disease, epilepsy, or similar ailments which may suddenly incapacitate him, shall be permitted to operate a crane, winch or other power operated hoisting apparatus.
- (d) No minor under eighteen (18) years of age shall be employed in occupations involving the operation of any power-driven hoisting apparatus or assisting in such operations by work such as hooking on, loading slings, rigging gear, etc.

§ 1915.118 Tables.

The provisions of this section apply to ship repairing, shipbuilding and shipbreaking.

TABLE E-1-DIMENSIONS AND SPACING OF WOOD INDEPENDENT-POLE SCAFFOLD MEMBERS

| Structural members | Light duty (U foo | p to 25 pounds t)—Height in fee | per square et | Heavy duty (25 to 75 pounds per square foot)—Height in feet | | | |
|---------------------------------|----------------------|------------------------------------|------------------|---|--------|--------|--|
| | ≤24 | >24≤40 | >40≤60 | ≤24 | >24≤40 | >40≤60 | |
| Poles or uprights (in inches) | 2×4 | 3×4 or 2×6 | 4×4 | 3×4 | 4×4 | 4×6 | |
| Bearers (in inches) | 2×6 | 2×6 | 2×6 | 2×8 | 2×8 | 2×10 | |
| Ledgers (in inches) | 2×6 | 2×6 | 2×6 | 2×8 | 2×8 | 2×8 | |
| Stringers (not supporting bear- | | | | | | | |
| ers) (in inches) | 1×6 | 1×6 | 1×6 | 1×6 | 1×6 | 1×6 | |
| Braces (in inches) | 1×4 | 1×6 | 1×6 | 1×6 | 1×6 | 1×6 | |
| Pole spacing—longitudinally (in | | | | | | | |
| feet) | 71/2 | 71/2 | 71/2 | 7 | 7 | 7 | |
| Pole spacing—transversely (in | | | | | | | |
| feet) | 61/2 min | 7½ min | 8½ min | 61/2 | 10 | 10 | |

TABLE E-1—DIMENSIONS AND SPACING OF WOOD INDEPENDENT-POLE SCAFFOLD MEMBERS— Continued

| Structural members | Light duty (fo | Up to 25 pounds ot)—Height in fe | s per square et | Heavy duty (25 to 75 pounds per square foot)—Height in feet | | | |
|-------------------------------------|--------------------|-------------------------------------|--------------------|---|--------|--------|--|
| | ≤24 | >24≤40 | >40≤60 | ≤24 | >24≤40 | >40≤60 | |
| Ledger spacing—vertically (in feet) | 7 | 7 | 7 | 41/2 | 41/2 | 41/2 | |

TABLE E-2—SPECIFICATIONS FOR SIDE RAILS OF LADDERS

| Langth (in fact) | Cross section (in inches) | | | |
|------------------|---------------------------|-----------|--|--|
| Length (in feet) | At ends | At center | | |
| 15 | 17/8×23/4 | 17/8×33/4 | | |
| 16 | 17/8×23/4 | 17/8×33/4 | | |
| 18 | 17/8×3 | 17/8×4 | | |
| 20 | 17/8×3 | 17/8×4 | | |
| 24 | 17/8×3 | 17/8×41/2 | | |

Table E–3—Specifications for the Construction of Horses

| Structural members | Height in feet | | | | | |
|-------------------------------------|--|-----------------------------|-----------------------------|--|--|--|
| Structural members | ≤10 | >10≤16 | 16≤20 | | | |
| Legs Bearers or headers Crossbraces | inches 2×4 2×6 2×4 or 1×8 | inches 3×4 2×8 2×4 | inches 4×6 4×6 2×6 | | | |
| Longitudinal braces | 2×4 | 2×6 | 2×6 | | | |

TABLE E-4—SAFE CENTER LOADS FOR SCAFFOLD PLANK OF 1,100 POUNDS FIBRE STRESS

| Coop in fact | Lumber dimensions in inches | | | | | | | | | |
|--------------|---------------------------------|-----------|--|------------|--|-----------|--|-----------|--|----------|
| Span in feet | Α | В | Α | В | Α | В | Α | В | Α | В |
| | 2×10 | 15/8×91/2 | 2×12 | 15/8×111/2 | 3×8 | 25/8×71/2 | 3×10 | 25/8×91/2 | 3×12 | 25/8×11½ |
| 6 | 256 192 153 128 110 | | 309 232 186 155 133 116 | | 526 395 316 263 225 197 | | 667 500 400 333 286 250 | | 807 605 484 404 346 303 | |

⁽A)—Rough lumber. (B)—Dressed lumber.

TABLE G-1—NUMBER AND SPACING OF U-BOLT WIRE ROPE CLIPS

| | Number | Minimum | |
|--|----------------|-------------------|--------------------|
| Improved plow steel, rope diameter, inches | Drop forged | Other material | spacing, inches |
| (1) | | | |
| 1/2 | 3 | 4 | 3 |
| 5/8 | 3 | 4 | 33/4 |
| 3/4 | 4 | 5 | 41/2 |
| 7/8 | 4 | 5 | 51/4 |
| 1 | 4 | 6 | 6 |
| 11/8 | 5 | 6 | 63/4 |
| 11/4 | 5 | 7 | 71/2 |
| 13/8 | 6 | 7 | 81/4 |
| 1½ | 6 | 8 | 9 |

 $^{^{1}\}mbox{Three}$ clips shall be used on wire size less than $^{1\!/}\!\!2\mbox{-inch}$ diameter.

TABLE G-2—MAXIMUM ALLOWABLE WEAR AT ANY POINT OF LINK

| Chain size in inches | Maximum allow- able wear in frac- tion of inches |
|----------------------|--|
| 1/4(9/32) | 3/64 |
| 3/8 | 5/64 |
| 1/2 | 7/64 |

TABLE G-2—MAXIMUM ALLOWABLE WEAR AT ANY POINT OF LINK—Continued

| Chain size in inches | Maximum allow- able wear in frac- tion of inches |
|----------------------|--|
| 5/8 3/4 | 9/64 5/32 11/64 3/16 7/32 1/4 9/32 5/16 |

 $[47~\mathrm{FR}~16986,~\mathrm{Apr.}~20,~1982,~\mathrm{as}~\mathrm{amended}~\mathrm{at}~61~\mathrm{FR}~26351,~\mathrm{May}~24,~1996;~67~\mathrm{FR}~44543,~\mathrm{July}~3,~2002;~76~\mathrm{FR}~33610,~\mathrm{June}~8,~2011]$

§ 1915.120 Powered industrial truck operator training.

Note: The requirements applicable to shipward employment under this section are identical to those set forth at \$1910.178(1) of this chapter.

 $[63\;\mathrm{FR}\;66274,\,\mathrm{Dec.}\;1,\,1998]$